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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,829	09/26/2001	Dittmar Klett	10191/2010	2625

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KENYON & KENYON  
ONE BROADWAY  
NEW YORK, NY 10004

EXAMINER

PERRY, ANTHONY T

ART UNIT PAPER NUMBER

2879

DATE MAILED: 12/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary****Application No.**

09/964,829

**Applicant(s)**

KLETT ET AL.

**Examiner**

Anthony T Perry

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 November 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) 9-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the metallic soldered or welded connection must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Figures 1A and 1B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2, 3, and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 2, it is unclear if the applicant is claiming that the connection extends substantially along a circumference of the central electrode or if the gap between the insulator and electrode exists substantially along the circumference of the electrode.

Regarding claim 3, it is unclear how the inner diameter of the insulating element can be smaller than the outer diameter of the central electrode when the central electrode is located inside the insulating element.

Regarding claim 4, claim 4 is dependent upon claim 3 which is rejected as being indefinite so claim 4 is also deemed indefinite. Furthermore, the Applicant is claiming the product of a spark plug including a method (i.e. a process) of making the spark plug, consequently, claim 4 considered "product-by-process" claim. In spite of the fact that a product-by-process claim may recite only process limitations, it is the product and not the recited process that is covered by the claim. Further, patentability of a claim to a product does not rest merely on the difference in the method by which the product is made. Rather, is the product itself which must be new and not obvious. As such, no patentable weight has been given to the process recited in claim 4 (see MPEP 2113).

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claims 1-2 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Carington (US 2,318,922).

Regarding claim 1, Carington discloses a spark plug in Figs. 1-3 comprising a partially cylindrical insulating element 15 having a central bore 17 and a base part. The spark plug further comprises a central electrode 18 in an opening in the base part of the insulating element 15, wherein the insulating element and the central electrode are connected by a metallic welded connection 19.

Regarding claim 2, Fig. 1 of the Carington reference shows the connection 19 located at an end of the central electrode 18 further from the base part and extending substantially along the circumference of the central electrode 18 closing the gap between the electrode 18 and the insulator 15. The outer diameter of the central electrode 18 is shown to be slightly smaller than the inside diameter of the insulating element 15.

Regarding claim 8, Fig. 1 of the Carington reference shows the inside surface of the ceramic insulator 15 at the connection part located at the end of the central electrode 18 is made rough which inherently increases the load capacity of the connection.

Claims 1-2 and 8 are rejected under 35 U.S.C. 102(e) as being anticipated by Fleetwood et al. (US 6,285,008).

Regarding claim 1, Fleetwood discloses a spark plug in Fig. 3 comprising a partially cylindrical insulating element 12 having a central bore 20 and a base part 24. The spark plug further comprises a central electrode 38 in an opening in the base part of the insulating element 12, wherein the insulating element and the central electrode 38 are connected by a metallic welded connection 70.

Regarding claim 2, Fig. 3 of the Fleetwood reference shows the connection 70 located at an end of the central electrode 38 further from the base part. The outer diameter of the central electrode 38 is shown to be slightly smaller in the region of the connection than the inside diameter of the insulating element 12. The connection closes a gap between the central electrode 38 and the insulator 12, wherein the gap exists substantially along the circumference of the central electrode.

Regarding claim 8, it is well known in the art to roughen a surface of an object that is being connected to another through the use of connecting material so as to increase the load capacity of the connection.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carington (US 2,318,922) as applied to claim 1, above, and further in view of Podiak (US 3,832,586).

Regarding claims 5-7, Carington does not specifically state the use of a spring loaded element that exerts a force on the central electrode in an axial direction. However, Fig. 8 of the Podiak reference teaches the use of such a spring loaded element that includes a contact pin 28 that is buckled (I) at least once. One of ordinary skill in the art at the time of the invention would have found it obvious to use such a contact pin so as that a good electrical contact will be

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maintained even when the central electrode expands and contracts as the spark plug is heated and cooled.

Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fleetwood et al. (US 6,285,008) as applied to claim 1, above, and further in view of Podiak (US 3,832,586).

Regarding claims 5-7, Fleetwood does not specifically state the use of a spring loaded element that exerts a force on the central electrode in an axial direction. However, Fig. 8 of the Podiak reference teaches the use of such a spring loaded element that includes a contact pin 28 that is buckled (I) at least once. One of ordinary skill in the art at the time of the invention would have found it obvious to use such a contact pin so as that a good electrical contact will be maintained even when the central electrode expands and contracts as the spark plug is heated and cooled.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Rempes, Jr. et al. (US 3,737,718) reads on claims 5-7 and King (US 2,272,210) reads on claims 1-2.

### **Contact Information**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is (703) 305-1799.

**Please note that the examiner's phone number will change to (571) 272-2459 on January 13, 2004.** The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (703) 305-4794. **The fax phone number for this Group is (703) 872-9306.**

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [Anthony.perry@uspto.gov].

*All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Anthony Perry  
Patent Examiner  
Art Unit 2879  
December 15, 2003

